WHAT IS CLAIMED IS:

1. A control system for controlling a gap between conductors in a plurality of electro-mechanical devices by controlled displacement of a displaceable conductor within each electro-mechanical device, comprising:

a current controller configured to generate a controlled current output for each electro-mechanical device in response to a control signal, the current controller selectively routing a charge to array elements each including control circuitry and one of the plurality of electro-mechanical devices.

2. The control system of claim 1, wherein displacement of the displaceable conductor within each electro-mechanical device is controlled by the respective controlled current output over at least 45% of an entire displacement range of the displaceable conductor.

3. The control system of claim 1, wherein the current controller comprises for each electro-mechanical device:

a current mirror configured to mirror a reference current onto each controlled current output;

an enabler configured to selectively enable the current mirror in response to the control signal; and

a switch which disables the current mirror output.

4. The control system of claim 3, wherein the switch comprises a transistor.

5. The control system of claim 3, further comprising a reference current generator configured to generate the reference current for the current mirrors.

6. The control system of claim 3, wherein the current controller has a footprint not greater than $20u^2$ per electro-mechanical device.

7. The control system of claim 1, wherein the control signal comprises a time modulated control signal.

8. The control system of claim 1, wherein the plurality of electro-mechanical devices comprises a plurality of MEMs devices, each of the plurality of MEMs devices including at least one fixed plate and an electrostatically movable plate.

9. The control system of claim 1, wherein changes in the controlled current outputs results in controlled displacement of respective displaceable conductors for a range greater than 33% of the full displacement range of the displaceable conductors.

10. The control system of claim 1, wherein the controlled current outputs are variable voltage compliant.

11. The control system of claim 1, further comprising a transistor for selectively setting a predetermined charge in the plurality of electro-mechanical devices before controlled displacement of the displaceable conductor within each electro-mechanical device.

12. The control system of claim 1, wherein the current controller comprises a digital-to-analog converter.

13. A method of controlling a gap between at least one fixed plate and an electrostatically movable plate in a MEMs device, comprising:

time modulating a control signal to represent a desired gap between the fixed plate and the electrostatically movable plate;

selectively routing a charge to array elements each including control circuitry and one of the plurality of electro-mechanical devices; and

displacing the electrostatically movable plate in response to the controlled current output.

14. The method as defined in claim 13, wherein selectively routing a charge comprises selectively mirroring a reference current onto a controlled current output coupled to the MEMs device on the basis of the time modulated control signal

15. The method of claim 13,

wherein selectively mirroring the reference current selectively mirrors the reference current onto a plurality of controlled current outputs, each of the plurality of controlled current outputs being coupled to one of a plurality of MEMs devices, and

wherein displacing the electrostatically movable plate displaces an electrostatically movable plate in each of the plurality of MEMs devices in response to a corresponding controlled current output.

16. The method of claim 13, further comprising:

generating the reference current.

17. The method of claim 16, further comprising:

adjusting the reference current to represent the desired gap between the fixed plate and the electrostatically movable plate.

18. The method of claim 13, wherein selectively mirroring the reference current onto the controlled current output generates a variable voltage compliant controlled current output.

19. The method of claim 13, further comprising selectively setting a predetermined charge in the MEMs device before displacing the electrostatically movable plate in response to the controlled current output.

20. A controller for controlling a gap between a fixed plate and an electrostatically movable plate in a MEMs device, comprising:

a current mirror configured to mirror a reference current onto a controlled current output coupled to the MEMs device, the MEMs device moving the electrostatically movable plate within the MEMs device in response to the controlled current output;

an enabler configured to selectively enable the current mirror in response to a time modulated control signal; and

a switch which disables the current mirror output.

21. The controller of claim 20, wherein the enabler comprises a transmission gate.

22. The controller of claim 20, wherein the switch comprises a transistor.

23. The controller of claim 20, wherein the controlled current output is a variable voltage compliant controlled current output.

24. The controller of claim 20, wherein changes in the controlled current outputs results in controlled displacement of respective displaceable conductors for a range greater than 33% of the full displacement range of the displaceable conductors.

25. The controller of claim 20, wherein the controller has a footprint not greater than $20u^2$.

26. The controller of claim 20, further comprising a switch for selectively setting a predetermined charge in the MEMs device before mirroring the reference current onto the controlled current output coupled to the MEMs device.

27. The controller of claim 26, wherein the switch comprises a transistor.

28. A controller for controlling a gap between at least one fixed plate and an electrostatically movable plate in each of a plurality of MEMs devices, comprising:

a first transistor coupled to a reference current source; and

a controlled current output generator for each of the plurality of MEMs devices comprised of:

a second transistor coupled to the first transistor so as to mirror the reference current source onto a controlled current output coupled to one of the plurality of MEMs devices;

an enabler configured to selectively enable the second transistor in response to a time modulated control signal; and

a MOS device coupled to the second transistor so as to disable the controlled current output when the second transistor is not enabled by the enabler.

wherein the plurality of MEMs devices move the respective electrostatically movable plates in response to the controlled current outputs of the respective controlled current output generators.

29. The controller of claim 28, wherein the controlled current output is a voltage compliant controlled current output.

30. The controller of claim 28, wherein respective electrostatically movable plates of each of the plurality of MEMS devices move in response to the controlled current outputs of the respective controlled current output generators.

31. The controller of claim 28, wherein the current controller has a footprint not greater than $20u^2$ per MEMs device.

32. A control system for controlling a gap between at least one fixed plate and an electrostatically movable plate in each of a plurality of MEMs devices, comprising:

a controller configured to generate a control signal to selectively move the electrostatically movable plate in each of the plurality of MEMs devices; and

a current digital-to-analog-converter (DAC) per MEMs device configured to generate a controlled current output based on the control signal to move the electrostatically movable plate in a respective one of the plurality of MEMs devices.

33. The control system of claim 32, wherein the controlled current output is a variable voltage compliant controlled current output.

34. A apparatus for controlling a gap between at least one fixed plate and an electrostatically movable plate in a MEMs device, comprising:

means for selectively setting a reference current onto a controlled current output coupled to the MEMs device on the basis of the time modulated control signal;

means for time modulating a control signal to represent a desired gap between the fixed plate and the electrostatically movable plate; and

means for displacing the electrostatically movable plate in response to the controlled current output.